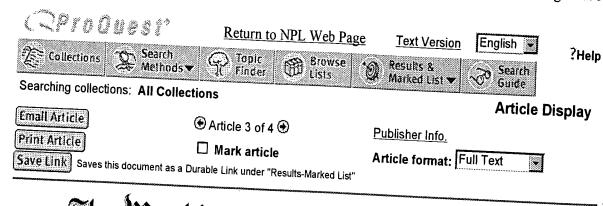


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       9:Business & Industry(R) Jul/1994-2002/Nov 20
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File 20:Dialog Global Reporter 1997-2002/Nov 21
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The Washington Post

Music From the Spheres; Two Local Companies Go Head to Head to Develop Pay

The Washington Post; Washington; May 19, 1997; Paul Farhi;

Sic:4832Sic:4832

Sub Title:

[FINAL Edition]

Start Page: ISSN:

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Subject Terms:

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Service introduction Digital broadcasting

Radio

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INDUSTRIAL

MACHINERY, HEAVY

SPECIAL INDUSTRY MACHINES

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SAVINGS & LOAN

BANKING

Geographic Names: Washington

DC US

South Atlantic

Personal Names:

Margolese, David

Briskman, Robert Margolese, David David Margolese Robert Briskman

Companies:

CD Radio IncSic: 4832

American Mobile Radio CorpSic: 4832

CD Radio Inc

American Mobile Radio Corp

CD Radio Inc.

American Mobile Radio Corp. American Mobile Satellite Corp.

CD RADIO INC

Abstract:

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David Margolese concedes that the concept -- pay radio -- is a little difficult to get one's mind around at first. But he offers a useful comparison: "Think of cable TV around 1970," he said. "If you told people then they'd be paying to watch TV they might have laughed -- until you told them that it would offer them more choice, more variety, and better reception than they ever had."

Full Text:

Copyright The Washington Post Company May 19, 1997

David Margolese concedes that the concept — <u>pay radio</u> — is a little difficult to get one's mind around at first. But he offers a useful comparison: "Think of cable TV around 1970," he said. "If you told people then they'd be paying to watch TV they might have laughed — until you told them that it would offer them more choice, more variety, and better reception than they ever had."

No one pays to listen to the radio today, of course. But by late 1999, two companies based in the Washington area aim to revolutionize a medium that hasn't changed much since the early 1920s. CD Radio Inc. of Washington, which Margolese founded and heads, and American Mobile Radio Corp. (AMRC) of Reston are facing each other to become the first to offer digital audio radio service.

DARS, as it's known, is merely a fancy acronym for pay-for-play radio. Within two years, the two companies plan to launch satellites that will be able to beam 30 to 50 channels of interference-free, compact-disc quality audio to receiving antennas no bigger than a silver dollar. The antenna feeds a special digital radio, which can pick up both the satellite signals and nearby AM and FM stations.

While that may sound like a newfangled way to do something Marconi long ago made simple, DARS has several obvious things going for it. First, it's a wireless technology, which means it can be used in the car, where most radio listening occurs. Second, since the satellites provide continental coverage, a listener can tune to the same satellite station from one end of the country to another — a potential godsend for truckers and other long-haul travelers. And third, most of the music and informational programming provided by CD Radio and AMRC will be commercial-free.

Margolese, 39, envisions offering some of the things "terrestrial" radio stations provide today, plus many things they don't: all-gospel music channels, or all-reggae, opera, blues, chamber music, uninterrupted symphonies or jazz in multiple permutations. "Do you think people in Omaha can turn on the radio {now} and listen to reggae music?" he asks rhetorically.

The principal difference from AM and FM stations is that satellite radio will come with a monthly bill. CD Radio and AMRC are still studying how to approach the market, but both say they will charge between \$5 and \$12 per month for their services. That's on top of the hardware, which will cost about \$150 more than a standard radio.

"The way I view it is people want choice, and they are willing to pay for it," said Lon Levin, a former Federal Communications Commission official who now is president of AMRC. "No matter how many {TV} channels people get on cable or DBS {direct-broadcast satellite} they always want more."

CD Radio and AMRC have already put a big down payment on that idea. Last month, the two companies were high bidders in a government auction of DARS licenses. AMRC bid \$89 million for its slot, and CD Radio paid \$83 million (the licenses are identical; the price difference reflects differing approaches to the auction). That's a pretty stiff price just for the right to do business (until some political maneuvering last fall, CD Radio looked as if it was going to get its license for free), but the licenses ensure that the two companies will have the pay radio market all to themselves.

More investment lies ahead. Margolese, a Canadian citizen who was one of the earliest advocates of pay radio, estimates that both companies will have to spend about \$500 million each before signing up their first customer. The outlay will primarily cover the cost of building, launching and insuring the satellites.

Neither company, however, figures to have trouble coming up with the cash. AMRC is a subsidiary of American

Mobile Satellite Corp., a Reston-based wireless phone company that is in turn part owned by public shareholders and some very deep pockets – <u>OAT&T Corp.</u>, <u>OGeneral Motors</u>' <u>Hughes Electronics Corp.</u> and Singapore

CD Radio is owned by Margolese (19 percent); Darlene Friedland (28 percent), who is a member of a wealthy industrial family; Robertson Stephens & Co. (14 percent), a mid-sized investment bank headquartered in San Francisco; and public shareholders. The company had no trouble raising \$135 million in a private placement earlier this year, which Margolese said easily will cover this year's expenses.

Robert B. Kaimowitz, a satellite industry analyst with Unterberg Harris in New York, calls CD Radio "one of the most compelling business opportunities" he has seen in telecommunications. Based on "conservative" expectations, he projects that CD Radio could have 7.5 million <u>subscribers</u> generating an annual cash flow of about \$633 million by the year 2003. But Kaimowitz cautions that there are significant risks: an unproven market, possible satellite failures, and a potential drain on revenues and cash flow if CD Radio winds up subsidizing hardware makers, as companies in the satellite TV market now do.

For Margolese, it's a relief just to still be in the pay-radio business. An entrepreneur who hit it big by the age of 30 in the Canadian paging and cellular business, Margolese was drawn to the idea of a satellite radio service after he made an investment in DMX, which delivers audio programming to homes via cable TV wires. He has spent the last seven years trying to get his venture off the ground. "It's been a long, hard journey," he said one recent afternoon in his sparsely furnished District office. "It's a minor miracle we are where we are today."

Money was never Margolese's problem, and neither was technology (CD Radio's co-founder and president, Robert Briskman, invented the coin-sized antenna). From the beginning, the real problem was politics. The FCC repeatedly delayed the DARS licensing process under heavy lobbying pressure from the National Association of Broadcasters, which represents owners of the nation's 12,000 radio stations.

"We argued that DARS was a threat to the local service that radio stations provide their communities," said NAB spokesman Dennis Wharton. The industry's fear, said Wharton, is that DARS services will pull listeners away from local stations, thereby undercutting their ability to pay for news, weather and sports programming. The trade association made much the same argument to forestall the development of cable and satellite TV as well.

The flaw in that argument is that many radio stations have cut back on local news even without pay competition. In any case, the NAB was successful in delaying the launch of the satellite services while "terrestrial" radio technology improved; radio stations are now in the process of developing their own digital signals, which will improve their audio quality.

"At the end of the day," said Margolese, "you just have to put your head down and keep going. I believe totally in the power of this idea. It is such a great idea."

[Illustration]

PHOTO,, Bill O'leary; CHART CAPTION: RADIO DAYS We are a nation of radio-listeners. According to recent surveys by Mediamark Research Inc., 83 percent of American adults listen to the radio. To meet the demand for greater variety, the number of radio stations grew 21 percent from 1980 to 1994. But now, two local companies are counting on radio listeners to be willing to pay for quality sound. Here is a look at who listens to radio: Percentage of population who listen to radio By household income Less than 10,000 round 11,000 round 12,000 round 12,000 round 12,000 round 13,000 round 14,000 round 15,000 round 16,000 round 1

Credit: Washington Post Staff Writer

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7/9/7 (Item 3 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
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02102521 Supplier Number: 43890511 (THIS IS THE FULLTEXT) WIDESPREAD DAB ACCEPTANCE 'PROBABLE,' PUBLIC RADIO SURVEY SAYS

Audio Week, v5, n22, pN/A

June 7, 1993 ISSN: 1044-7601

Language: English Record Type: Fulltext

Document Type: Newsletter; Trade

Word Count: 637

TEXT:

While consumer demand for digital radio services remains "unproven," variety of factors bode well for future of DAB, suggesting "widespread DAB adoption and implementation is probable, at least as an enhancement technology. So concluded survey conducted for Corp. for Public Bcstg. by Bortz & Co. consulting firm. First phase of projected 3-phase year-long study to identify likeliest DAB implementation scenarios found climate favorable for development of DAB market, based on 3 major factors: (1) Consumers can embrace new age of DAB radios even when not aggressively pursuing digital radio purchase because many sets are replaced as "byproduct" of another purchase, such as new car or hi-fi component system. (2) Anticipated conversion costs for radio stations "are relatively low and can in many cases be covered with a normal capital replacement budget." Natural clamor by competitors to keep pace with rival DAB stations "suggests that most stations will follow the lead of early (station) adopters." (3) Substantial rush to market DAB radios "seems likely" among receiver makers who view digital audio as minimum "element" in state-of-art audio systems. Retail price of DAB receivers "is projected to be generally consistent" with that of existing audio component systems and car radios.

On pricing point, study said consumer receiver costs are expected to be \$50-\$350 "after full production quantities are achieved," but didn't specify how long after launch of DAB such milestones would be achieved. Report said receiver costs could vary by type of DAB format, with in-band on-channel (IBOC) form having potential to be most expensive in comparison with other technologies. As for station conversion costs, report said transmitters will be priced at \$50,000-\$150,000, with "new-band" systems potentially at high end of price spectrum, IBOC at low.

Satellite DAB and other subscription-based services such as cable-delivered digital audio "will pose relatively little threat to commercial broadcasters," report said, basing finding on review of "early" digital cable results and satellite DAB proposals now pending before FCC. Pay-per-listen and subscription DAB services "appear likely to evolve as niche products serving audiophiles and underserved listening populations," with household penetration limited to 15% or less, including mobile electronics users.

Of 4 possible DAB implementation "scenarios" considered, report concluded that complementary in-band terrestrial and S-band satellite services appeared "most likely" to develop because it "represents a continuation of the DAB evolutionary path evident today." However, it said development of scenario was predicated on in-band systems' being proved technically viable and thereafter being chosen as standard for terrestrial delivery. "Concurrently," report said, "S-band development must move steadily forward -- with the FCC adopting a process enabling the emergence and licensing of one or more strong satellite proponents over a relatively short period."

Report said "fast-track" satellite DAB implementation would spur

correspondingly rapid action by terrestrial broadcasters to adopt "manageable" in-band system. It envisioned launch of terrestrial DAB service first, followed by satellite DAB "in relatively short order." As for implications of in-band/S-band satellite scenario on receiver makers, report said drawback for manufacturers would be higher cost risks for S-band radios if technology were limited only to U.S. market and thereby failed "to emerge as a popular consumer product." DAB and Digital Delivery

NAB, which opposes satellite DAB on ground that it runs counter to concept of localism, urged FCC to reject waiver request by Satellite CD Radio to build digital radio transmission facility. Granting construction waiver would give satellite DAB proponents "competitive head start" over existing terrestrial radio broadcasters, NAB said. With FCC yet to develop comprehensive DAB policy, granting of waiver would "prejudice" any plan adopted later because regulators would be less likely to "pull the plug" on \$10-million project, NAB said. Assn. asked that waiver request "be entertained by the full Commission" instead of delegated to FCC staff and that it be made part of formal comment and rulemaking procedure.

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INDUSTRY NAMES: BUSN (Any type of business); ELEC (Electronics) NAICS CODEs: 33431 (Audio and Video Equipment Manufacturing)

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7/9/11 (Item 2 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
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06451812 SUPPLIER NUMBER: 13704334 (THIS IS THE FULL TEXT)

The five vying for digital audio radio service.

Scully, Sean

Broadcasting & Cable, v123, n16, p54(2)

April 19, 1993

ISSN: 1068-6827 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 1031 LINE COUNT: 00080

ABSTRACT: Five systems are currently vying to be chosen as the standard for satellite digital audio broadcasting (DAB). They are Satellite CD Radio, Primosphere, American Mobile Radio Corp, Sky Highway and Digital Satellite Broadcasting Corp. The DAB plans of each are summarized. The primary advantage of satellite DAB is its flexibility. Unlike C-band, which relies on parabolic dishes, DAB signals can be received on flat antennas placed on cars and houses or worn on the body.

TEXT:

The idea is simple: you turn on your home, car or portable radio and receive CD-quality digital radio signals beamed directly from satellites orbiting above. The application of this idea, however, is considerably more complicated.

The race to build a digital audio radio service, or a satellite digital audio broadcasting service, as it is sometimes called, began in 1990 when Satellite CD Radio of Washington, D.C., filed an application with the FCC.

In 1992, the FCC called for other companies to also file DARS applications so all documents could be reviewed together. By Dec. 15 of last year, five other companies had filed DARS applications: Primosphere, Loral Aerospace Holdings, American Mobile Radio Corp., Sky Highway and Digital Satellite Broadcasting Corp.

Unlike the familiar C-band television satellite broadcasting system, which uses large parabolic dishes to receive signals, satellite DAB is designed to be received on a flat, patch-like antenna that can be built into an automobile roof, worn on the body or put on a receiver for portable service, or placed on the side of a house for fixed receiver reception.

The digital signal is also well suited to transmitting other kinds of data such as geographical information for vehicles. All Applicants have noted the potential for use of these "ancillary services," but none have been very specific about their intentions.

Earlier this year, Loral announced that it is no longer interested in DARS, leaving only Satellite CD Radio and the four other companies. The following is a run-down of the five remaining DARS applicants: Satellite CD Radio, Washington * David Margoles, president. SCDR proposes to launch two Hughes HS-376W satellites, positioned at 80 degrees and 110 degrees West latitude. The service would offer, on a subscription basis, 30 CD-quality music channels to the continental U.S. The formats have not yet been determined, but a company spokesman said the service would be similar to existing cable-based subscription services, with various classical, rock, rap and country formats. Whether or not the channels will feature a live announcer has not yet been determined. The company aims to serve primarily car radios, although it says portable and fixed radios should be able to receive the signal. Its proposed system will cost in excess of \$320 million.

Primosphere, New York * Clifford Burnstein and Peter Mensh, owners.

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Primosphere proposes to launch two satellites, type still undetermined, to be place at 80 degrees and 110 degrees West latitude. The service would offer 46 CD-quality and 12 FM-quality channels to the continental U.S. Of all the applicants, Primosphere has been the most specific about its formats. Burnstein said the service will offer narrowly focused formats, including rap, urban, heavy rock, light rock, popular classical and serious classical. Burnstein also promises some unusual formats, including folk and bluegrass, soul, roots rock, and serious jazz. The intent, he said, is to offer listening options that are not economically viable on a local level. This may serve, he said, to revitalize radio listening as a whole and to boost sales of albums by lesser-known or special-interest artist. Primosphere's channels will be free to the public, relying on ad revenue. The cost of the proposed service is \$396 million.

American Mobile Radio Corp., Washington * Brian Pemberton, president. AMRC is a wholly owned subsidiary of mobile satellite telecommunications company American Mobile Satellite Corp., which is, in turn, owned by Hughes Communications Inc., McCaw Cellular, Mtel and Singapore Telecom. It proposes to launch two Hughes HS-601 satellites to be place at 99 degrees and 103 degrees West latitude. They would provide 15 CD-quality channels, five stereo FM-quality channels and five mono FM-quality channels to the continental U.S., Alaska, Hawaii, Puerto Rico and the Virgin Islands. AMRC's formats have not been determined, although they will probably include whatever music and talk formats are popular when the service goes on the air, said Earl Galleher, marketing communications director. The services will be available as a mix of free, ad-supported channels and paid of the proposed system is \$528 million.

Sky Highway, Denver * Charlie Ergen, president. Sky Highway is owned largely by Ergen, who also owns Echostar, a direct-broadcast-satellite licensee. The company proposes to launch two satellites, either GE Astro Series 7000's or Fairchild GSI 2000's, to be placed at 87 degrees and 110 degrees West latitude, which would provide 15 CD-quality channels per satellite. Each would cover half the continental U.S. In addition, said partner David Drucker, Sky Highway is building a network of unused AM stations to act as repeaters or boosters for the satellite broadcasts. The exact content of the channels is undetermined. Drucker said, and will depend on the market at the time the system is launched. Services would be available on a subscription basis. The cost of the system is estimated at \$176 million.

Digital Satellite Broadcasting Corp., Seattle * Richard Anglin, president. DSBC proposes to launch one GE Astro Series 7000 satellite, along with an identical back-up satellite, to be placed at 101 degrees West latitude. The service would provide 16 channels to the entire U.S., including Alaska, Hawaii, Puerto Rico and the Virgin Islands. The company proposes to use a special antenna to provide 496 CD-quality channels. The format is undecided, but Anglin said he has been talking with a variety of programers and syndicators: "We've told them that if this is a re-hash of what's available on traditional radio, it's not going to sell." He also said he's been talking with some radio stations about uplinking with the service using the spot beams to increase their regional coverage. Services would be available for a flat subscription fee or on a pay-per-listen basis. The cost of the system is estimated at \$622 million.

INDUSTRY CODES/NAMES: ARTS Arts and Entertainment
DESCRIPTORS: Digital audio broadcasting--Standards; Direct broadcast
satellite radio--Standards
SIC CODES: 4832 Radio broadcasting stations
FILE SEGMENT: TI File 148

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7/9/9 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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06433491 Supplier Number: 54971899 (THIS IS THE FULLTEXT)

Satellite Radio Start-Ups Seek Subscribers.

HOGAN, MONICA

Multichannel News, v20, n26, p50

June 21, 1999 ISSN: 0276-8593

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Word Count: 1231

TEXT:

Two start-up companies are betting that new satellite-delivered audio services launching over the next two years will do for radio what cable did for television: provide an incentive for programmers to develop new content and create an all-new revenue stream from subscription services.

XM Satellite Radio Inc. made news earlier this month when it announced that it received \$250 million in new financing from four backers: DirecTV Inc., General Motors Corp., Clear Channel Communications Inc. and a private-investment group including Columbia Capital, Telcom Ventures L.L.C. and Madison Dearborn Partners.

The company needs another \$670 million to launch its two satellites, as well as its consumer service, within the next two years, according to CEO Hugh Panero.

CD Radio Inc., XM's publicly traded competitor, has already raised \$1 billion through a combination of debt and equity, chairman David Margolese said.

In addition to financing, XM gains significant distribution assistance from its partnerships with GM and DirecTV. GM will factory-install new radios combining the AM, FM and XM bandwidths into its new cars, and its dealers will be able to demonstrate the new technology when customers come in to test-drive the vehicles. The vehicles will also be equipped with cigar-sized satellite antennas.

Panero said GM's backing is a huge vote of confidence for the new technology. CD Radio is also in serious discussions with car manufacturers.

DirecTV will pitch XM's aftermarket car radios, as well as home-audio equipment, to its current consumer-electronics retail accounts. The direct-broadcast satellite provider will also lend operational assistance to XM in matters such as conditional access, billing and customer service.

The new technology will bring to radio "the same convenience, choice and quality that cable and DirecTV have brought to television," Panero said.

Multichannel-audio service is not entirely new: Companies like DMX and Music Choice provide commercial-free music to cable and DBS subscribers in their homes and businesses, most often as add-ons to video subscriptions.

But XM and CD Radio are expected to have a more direct appeal because they plan to target captive audiences where they're most likely to listen to content, rather than view it.

Subscription radio is expected to appeal to car owners, truck drivers and recreational-vehicle enthusiasts who spend a great deal of time on the road.

Because XM and CD Radio are national services, drivers can travel between different markets without worrying about losing a signal in the middle of a song or talk show.

In larger, urban markets, terrestrial repeater networks -- much like

those used for wireless telephones -- will help to protect against interference from tall buildings.

The potential financial upside for the new companies is greater than that for cable television or DBS, executives and analysts predicted.

Bruce Leichtman, analyst for Boston-based market-research firm The Yankee Group, said there are several reasons why the market is poised to do

When asked about their interest in such a service, consumers readily understood the product proposition and grasped what the benefits would be, Leichtman said, which isn't always true with new technologies.

At \$10 per month, the service carries a reasonable price point, he added. And it will be ubiquitously deployed from day one, so customers won't be forced to wait for the service as they might for cable-modem availability, for example.

Leichtman predicted that up to 20 percent of the country's 200 million vehicle owners would sign up for satellite-radio subscriptions within the first five years of the service launches.

And in the event that those projections fall short, the new satellite-radio companies are poised to make a profit, even with more modest market penetration.

Margolese said CD Radio would reach breakeven on a cash-flow basis with less than 1 percent penetration. But he clearly expects the service to

Although skeptics might question whether consumers are willing to pay for yet another monthly subscription service, Margolese remains confident.

As in the early days of cable television, some asked why consumers would pay for something that they're accustomed to getting free-of-charge.

"They're usually the same people sitting with a bottle of Evian in front of them while tap water is available three feet away," Margolese

said. "People pay for things that they could get for free all of the time."

Margolese said he thinks that CD Radio's launch has a market potential sum to those of DBS providers DirecTV and EchoStar Communications Corp. "if they had launched back in 1970, when cable wasn't entrenched, and when the main competition was free, over-the-air television."

Through its \$50 million investment in XM last week, DirecTV will own about 10 percent of the company DirecTV also gains access to a portion of XM's satellite capacity, which it will use to launch its own original audio

DirecTV has not yet started to develop the new audio content, senior vice president of new ventures Steve Cox said, although the DBS provider has created original programming for its video service, including pay-per-view concerts. "Music is a logical involvement for us," Cox added.

Over time, DirecTV may negotiate with XM to bring some of its programming over to its DBS platform. Cox predicted that DirecTV -- which already offers Music Choice audio channels to its DBS subscribers -- would bring only a subset of XM's channels to its customers.

Since DirecTV and XM appeal to similar consumer demographics, Cox added, the companies would develop cross-promotional opportunities, which may eventually include discounts for subscribers who sign up for both

Premium and even pay-per-listen options are also possibilities for both XM and CD Radio down the road, although both companies said they would launch their services with basic packages of about 100 channels for \$10 per

DirecTV and XM may look at bringing seasonal sports packages, such as the National Football League's "NFL Sunday Ticket," over to the audio format, but the sports leagues would have to be involved directly in deals

 ΣM and CD Radio have already struck content deals with brands

recognizable to cable and DBS subscribers: C-SPAN, Black Entertainment Television, Cable News Network and Speedvision, for example.

"One of the significant things about providing content that works well in a mobile environment is that you get a terrific brand extension in

In most cases, the cable-programming companies will produce unique content for the audio platform, Margolese said. The exception would be talking-heads-type programming like that of C-SPAN, which translates well

CD Radio plans to offer 50 channels of commercial-free music, while another 50 channels of talk and information programming would be

As in the early days of cable, commercial-free programming will be one draw for the satellite-radio services. Other benefits similar to cable, Margolese said, would be the ability to get programming that you can't get on the radio today and the ability to get a clear signal where you

A NATIONAL PLATFORM

Eventually, XM and CD Radio consumer hardware will be interoperable, as mandated by the Federal Communications Commission, Margolese said.

"What we're creating is a national radio platform, which does not exist today" Panero said.

"The business feels very similar to cable," he added. "That's one of the reasons why I feel very comfortable in it. It has a lot of the same excitement that existed in the early stages of cable and the early stages

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DIALOG(R)File 20:Dialog Global Reporter
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00151671 (THIS IS THE FULLTEXT)

Media: Radio's DAB hands tune in for a revolution: Digital audio broadcasting is riding on the crest of a wave to a new wireless medium, says Jamie Doward

JAMIE DOWARD
OBSERVER, p5
August 03, 1997
JOURNAL CODE: FO

JOURNAL CODE: FOBS LANGUAGE: English RECORD TYPE: FULLTEXT

WORD COUNT: 592

LEADERS in the world of broadcast technology are about to gather to reinvent the wheel, or rather the radio. The first digital audio radios on the consumer market go on show next month at the radio trade fair in Berlin.

Industry insiders predict they will revolutionise their medium.

Feedback from forum groups, set up by the BBC six months ago to indicate whether digital audio broadcasting (DAB) can capture the hearts and ears of the public, augurs dramatic changes in the way the medium is used, both by broadcasters and listeners.

The corporation, which has its own DAB multiplex (radio-speak for a bunch of channels), issued listeners in London and Birmingham with radios capable of picking up digital audio and regularly asked them what they thought of the services on offer. The verdicts give hope to those in the industry who hail DAB as the 'third age of broadcasting'.

Optimism is tempered by economic realism. Digital technology suffers from the high costs associated with any fledgling electronics industry. DAB radios cost about pounds 600, but with at least 10 companies now manufacturing sets, the price is expected to fall to less than pounds 100 by 2000.

Listeners were enthusiastic about the quality of sound the new service provided. Many said the new service made them feel as if they were present at a live event and some were reportedly reluctant to give the sets back.

According to Amanda Dawe, of the BBC's DAB unit, sound quality will be one of DAB's major selling points. 'It's very robust, unlike analogue radio signals which can get broken up when you're in the car, even with FM.

'The radio spectrum is very crowded, so by switching to DAB we're going to have more freedom and hence better quality.' BBC market research suggests more than 70 per cent of people would be interested in buying a digital radio with 65 per cent of them basing their purchase on sound quality.

Dawe says: 'We believe DAB will start at a premium price which will drop as user volume increases.'

The BBC plans to have 27 DAB transmitters across the UK by next spring, covering 60 per cent of the population.

On its current multiplex, listeners can hear Radios One to Five, as well as Radio Five Sports Plus and a parliamentary channel.

Among other companies experimenting with a London multiplex are the GWR radio group, and BT, who are spearheading a pounds 1 million pilot project representing 15 business interests, including Sony, Grundig, Mitsubishi and Ford. It aims to find out if DAB can attract enough listeners to convince advertisers.

Apart from better sound and more channels, DAB also has features which commercial radio stations, such as GWR, owner of Classic FM, sees as crucial for attracting advertising revenue.

. DAB radios can recieve data as well as audio signals, which means radios will be able to display information on screen. An advertisement for a car dealer could run while the screen carries details of vehicles on the forecourt. Such an application is limited by regulations restricting this sort of data on any multiplex to 10 per cent of output. The industry is pressing the government to re-examine the law.

DAB radios will also be able to take 'smart cards', using the technology which makes pay-TV possible.

Music Choice Europe, whose major backers are Warner Music, Sony and EMI, already owns DAB licences in Germany and Italy and offers subscribers 50 music channels.

Although users pay per month, rather than for a particular event, Simon Bazalgette, MCE's director of sales and marketing, believes a time will come when frustrated Oasis fans unable to see their group live will be able to tune into the concert.

'You can already see things happening along these lines. On the Internet, for example, users can now access pay events.'

Quentin Howard, GWR's technical director, believes pay-per-listen radio sets will be available in about five years and portable DAB's within years. Howard says: 'I'm very positive about digital radio broadcasting, but I think some companies don't really understand it yet. The potential benefits for the listeners are enormous, but the main problem is getting listeners to show to advertisers.

'DAB will take the use of data broadcasting to a new level. It will be the age of the multimedia wireless.'

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COMPANY NAMES: GWR Group PLC; British Telecommunications plc; Sony Corporation; Grundig Aktiengesellschaft; Mitsubishi Corporation; Ford Motor Co Ltd; Classic FM PLC; Warner Music UK Ltd; EMI Group plc

DESCRIPTORS: Service & Product Use; Marketing; Trade Fairs & Exhibitions

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PROVINCE/STATE: Berlin

SIC CODES/DESCRIPTIONS: 4832 (Radio Broadcasting Stations); 3663 (Radio and TV Communications Equipment)

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7/9/3 (Item 1 from file: 9)
DIALOG(R)File 9:Business & Industry(R)
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02408401 (THIS IS THE FULLTEXT)

Technology Giants Join Forces with New Jersey Firms on Internet Telephony (Microsoft Corp has made equity investments in Audible Inc and Dialogic Corp, while Netscape Communications has invested in IDT Corp; all three companies have developed voice over IP technology)

Star-Ledger , p N/A

March 12, 1999

DOCUMENT TYPE: Regional Newspaper ISSN: 0885-6613 (United States)

LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 599

ABSTRACT:

Microsoft and Netscape have formed alliances with three New Jersey companies to push the envelope on voice technology over the Internet. The latest deal involves Audible Inc., a Wayne-based company that allows people to download books, newspapers and radio programs from the Internet for use in their cars. A portable player can connect to the car's audio system so drivers can listen to "The Testament" by John Grisham or testimony by Alan Greenspan.

Microsoft and three other companies -- New York Life Insurance, CSK Venture Capital and C. Blair Asset Management -- are making an \$11 million investment in Audible. "We're probably more famous in Silicon Valley than we are in Wayne," says Don Katz, an author who founded the privately held firm in 1995. Intel, AT&T Ventures and Compaq already own part of the 47-employee company. Two other New Jersey companies just linked up with the big tech names -- and their drawing power. This month, Microsoft bought a 5 percent stake in Dialogic Corp., a Parsippany telephony software firm, for \$24 million. This week, Netscape announced an agreement with IDT Corp., an Internet telephony service firm. Netscape customers will be able to use the Hackensack firm's Net2Phone software to make cheap phone calls on the Internet.

TEXT:

Mar. 12--Microsoft and Netscape have formed alliances with three New Jersey companies to push the envelope on voice technology over the Internet.

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Parsippany telephony software firm, for \$24 million. This week, Netscape announced an agreement with IDT Corp., an Internet telephony service firm. Netscape customers will be able to use the Hackensack firm's Net2Phone software to make cheap phone calls on the Internet.

The companies say it doesn't hurt to have a name-brand tech firm behind them. Dialogic's CTMedia software, which links computers and telephones, is expected to show up on future versions of Microsoft's Windows operating system.

"We've got a fairly substantial base of customers, but the support and endorsement of Microsoft kicks it up to a higher level," says Gary Marks, vice president of corporate marketing for Dialogic.

IDT should get a boost when its software shows up on the next version of Netscape Communicator this summer. People will be able to press a button and call a friend in Argentina for less than 5 cents a minute, says IDT spokeswoman Sarah Hofstetter.

"We have a few million customers, but that doesn't match the 50 million customers that are now running Netscape Navigator," she says.

Netscape and Microsoft like the technology they are acquiring.

IDT has "really smart people, and their (Net2Phone) product is best of breed," says Netscape group program manager Tom Tsao.

"Spoken word content has a big potential for electronic delivery, and Audible has a great library of content," said Dick Brass, Microsoft's vice president for technology development.

"This financing, and the industry leaders behind it, further ratifies our service" in delivering Internet audio, said Andy Huffman, president and chief executive of Audible.

The investments show how the Internet is changing to provide information that can be heard as well as seen. For example, Audible's Web site (www.audible.com) allows people to download a Stephen King or John Grisham novel, stories from The New York Times or the "Fresh Air" program offered by National Public Radio.

Instead of pay per view, Web surfers can pay per listen. They can hear electronic books or radio programs on a portable player using a cassette converter called the MobileAudio system, which costs about \$200. An audible newspaper subscription might cost about \$7 a month, according to Audible founder Don Katz. The site is popular with commuters, he says.

"About 84 million people drive to work alone. It's powerful to program your own listening time because you can't read while you're driving," Katz says. "Our average customer spends about \$20 a week. These are people who either love to read or have to read but don't have time. Our next step is to offer regional newspapers that can be downloaded."

Star-Ledger staff

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COMPANY NAMES: AUDIBLE INC; DIALOGIC CORP; IDT CORP; MICROSOFT CORP; NETSCAPE COMMUNICATIONS CORP

INDUSTRY NAMES: Information industry; Software; Telecom services;
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PRODUCT NAMES: Data communications services (481317); Prepackaged
software (737200)
CONCEPT TERMS: All company; Mergers & acquisitions
GEOGRAPHIC NAMES: North America (NOAX); United States (USA)
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7/9/6 (Item 2 from file: 636) DIALOG(R) File 636: Gale Group Newsletter DB(TM) (c) 2002 The Gale Group. All rts. reserv.

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JAPANESE COPYRIGHT GROUPS TO SEEK HIGHER FEES ON DAB

Audio Week, v5, n37, pN/A

Sept 27, 1993 ISSN: 1044-7601

Language: English Record Type: Fulltext

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Japanese copyright groups, including Recording Industry Assn. of Japan (RIAJ), said they expect to open negotiations shortly with commercial broadcasters and will seek copyright fees 2-3 times higher on digital audio transmissions than fees currently collected on conventional analog

Taking center stage in negotiations, according to Nikkei newspaper, will be satellite-based pay-per-listen subscription service, Radio St. Giga, which was launched in March 1991 and has been in financial trouble because of lack of subscribers. Reports estimated that service had only 45,000 paid subscribers at end of Aug. In bid to boost listenership, St. Giga in July changed to new programming format by airing new CD albums in

Service reported significant increase in number of subscribers as result, but in process it alienated RIAJ and other copyright groups that feared St. Giga's practice would displace CD sales at retail by encouraging home listeners to copy albums digitally. Nikkei reported that RIAJ receives about yen 600 million annually in copyright fees on analog transmissions from group called National Assn. of Commercial Bcstrs. and additional yen 20-30 million from govt. broadcaster NHK.

As for U.S.-based copyright implications of emerging digital audio transmissions, few minds were changed in panel debate at recent NAB Radio Show in Dallas pitting recording industry representatives against broadcast executives. Subject was RIAA-backed performance right legislation recently introduced in House and Senate (AW Aug 16 p3/July 5 p1). RIAA Exec. Vp-Gen. Counsel David Leibowitz restated Assn.'s long-held position that legislation (S-1421/HR-2576) would fill purported loophole in U.S. copyright law by extending to sound recordings same performance right protection afforded other creative works. Leibowitz told Radio Show that lack of such protection in digital transmissions era "frankly has my members very concerned about the future of the industry."

Performance right on sound recordings "is not an issue relating just to (copyright) fees," Leibowitz told skeptical radio station owners. He said legislation, if enacted, would allow "the marketplace to determine how programming -- in our case, sound recordings -- will be delivered in this new digital environment." Leibowitz said record companies believe that "we're going to be entering an environment with digital transmissions where there may be no need to buy records or even record records in your house." While legislation would apply to over-air terrestrial digital radio stations as well as pay-per-listen digital audio services, Leibowitz said RIAA particularly is concerned about such subscription-based ventures and cable digital audio where \$10 one-time charge could give subscribers "lifetime access" to CD album they wouldn't have to buy in record store. "Without control over that environment, we don't have an industry," -Leibowitz said.

Registering strong opposition to performance rights legislation, NAB

Asst. Gen. Counsel Ben Ivins said RIAA quest for law is based on "narrow" view that music industry deserves performance right simply because other creative works are afforded that protection. In point reminiscent of arguments made for years by opponents of home taping royalties, Ivins said recording industry boasts \$9 billion annually in U.S. revenues, mostly from 6 major distribution companies. Music companies and superstar performers who would collect new copyright fees already "are doing quite nicely" financially, Ivins said. By comparison, he said, 9,700-odd radio stations in 1992 generated only \$8.7 billion in revenues, but over half of all stations lost money and those in smaller U.S. markets suffered "real financial strains." Stations already pay \$300 million annually to music copyright societies such as ASCAP, BMI and SESAC, he said, noting often-stated NAB position that payment of such fees constitutes difference between profit and loss for many stations. NAB is "sympathetic" to RIAA claims of potential damage to record sales caused by digital pay-per-listen services and would be willing to support music industry on legislation applying only to such services, Ivins said.

Leibowitz countered that only 1.75% of radio station revenues go to pay copyright fees to music publishers and songwriters. "In the aggregate, sure, that sounds like a lot of money, but when this is the lifeblood of what your business is, I don't think that that is that significant," he said. Leibowitz disputed NAB contentions that radio industry is in poor financial shape, saying projections he has seen covering years before 2000 "continue to be very positive for the industry. But even if it's not positive for the industry, have you stopped paying huge salaries to your disc jockeys?"

Leibowitz said "certainly there are strong arguments" that radio airplay has significant promotional value for record companies and artists. "There is some validity to that and I'm not going to dispute that. But if that's the case, why the fear" in era of digital transmissions? he asked. "If -- as I've been told all along -- we try to have you promote our records, why wouldn't we give them to you" rather than sell rights for fees that stations would be incapable or unwilling to pay? Performance rights legislation, if enacted, could have "some effect" on over-air digital stations, Leibowitz said, but "I don't want you to believe that it's going to be disruptive to your practice."

But remaining unconvinced was Dick Harris, WFMR(FM) Milwaukee, chmn. of NAB Radio Music Licensing Committee. He said recording industry traditionally has expressed fear that new technologies such as FM stereo and cassettes would "ruin" sales. But "the fact is the record industry has never been stronger than it is today," he said. "We can only serve so many masters, and one of them is preserving the investment that we all have made in our business as well as serving the public. If individual sources are going to continually withdraw some kind of economic foundation from us, we are not going to be serving the audience which we exist for -- and that's

Notwithstanding Leibowitz's assurances earlier that performance rights issue is not just about copyright fees, Ivins argued that "I am not so sanguine that there won't be fees" or creation of large copyright societies like ASCAP or BMI to collect and distribute funds paid to record companies by radio stations. Ivins said he also envisions negative scenario in which record companies would demand airplay of 10 unknown artists in order for station to procure right to carry Michael Jackson song. Leibowitz countered that broadcasters sought right to negotiate programming terms with cable operators under retransmission consent legislation passed earlier by

DAB and Digital Delivery

Opposing sides in emotional debate over role of Ottawa-based Communication Resource Center as site for DAB subjective-listening tests by EIA Digital Radio Subcommittee apparently buried hatchet in tumultuous

meetings in Washington last week. In-band on-channel (IBOC) DAB proponent USA Digital Radio had objected to use of CRC on ground that Canadians, who support Eureka-147 DAB technology in L-band (1500 MHz), have ideological bias against their system. According to EIA Digital Radio Subcommittee Chmn. Randall Brunts of Delco Electronics, EIA agreed to request by National Radio Systems Committee (NRSC) that CRC refrain contractually from publishing DAB test results for 6 months after it delivers material to EIA and NRSC. NRSC Chmn. Charles Morgan, Susquehanna Bcstg., had told us at NAB Radio Show in Dallas that he would raise issue at EIA and NRSC meetings that had been scheduled for last week (AW Sept 13 p2). Meanwhile, we're told NRSC formed new subgroup to study high-speed data transmissions on ${\tt FM}$ subcarrier. Morgan will serve as acting chairman until permanent chairman and members are chosen at meeting scheduled for early Nov. Subgroup was created following preliminary research that showed there was considerable degree of interest in probing issues involving FM-based high-speed data transmission applications, sources said.

BBC said it has started "major engineering tests" of Eureka-147 DAB using high-power transmitters (up to 10 kw each) in London area to probe coverage aspects of new technology. BBC said it currently is operating transmitter at Crystal Palace and will put others on line in next few weeks at Alexandra Palace, Reigate, Wrotham. All 3 transmitters -- 2 of which are on loan from Harris Corp. -- will operate on same VHF frequency (226 MHz). BBC said survey vehicles traveling throughout London will measure field strengths of individual transmitters and how they work together to form single frequency network by which same programming can be beamed on same frequency to listeners throughout country. BBC said: "It is anticipated that in the U.K., a number of national and local DAB services will be broadcast terrestrially using VHF frequencies. Following completion of the tests, the BBC expects to produce detailed proposals for the introduction of DAB services throughout the U.K."

Advertising-supported satellite DAB venture launched in 1997 could generate revenues exceeding \$500 million by year 2001 and \$1.2 billion by 2006, according to projections in wide-ranging Booz-Allen & Hamilton survey report, Potential Markets for Advanced Satellite Communications. Report was commissioned by NASA Lewis Research Center, Cleveland, where EIA DAB tests are to begin early next year. Report said figures on satellite DAB ad revenues are "contingent" on achieving audience of more than 80 million listeners within 6 years after launch and presume that car receivers will cost maximum of \$50. Report said "it is likely that car receiver sales will be paced by replacement of the domestic automobile fleet because they represent significant consumer investments." It suggested that "cooperation with automakers or car rental companies could, therefore, provide significant opportunities to influence audience growth rates." In scenario envisioning subscription-based satellite DAB service, report said, audience required to achieve "minimal return" of 8% is far smaller than that needed for ad-based service -- 2.7 million listeners in 10th year. Analysis, which assumes monthly charge of \$3 per channel with average listener choosing 3 channels, said venture would be capable of making profit in 3rd year of operation. Assuming same 1997 launch date as ad-based DAB model, report said, venture would generate \$241 million in revenue in year 2001 and \$293 million in 2006. For copy of report: James Hollansworth, NASA Lewis Research Center, 216-433-3458.

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NAICS CODES: 51311 (Radio Broadcasting); 51334 (Satellite
Telecommunications); 51222 (Integrated Record Production/Distribution)

7/9/12 (Item 3 from file: 148) DIALOG(R)File 148:Gale Group Trade & Industry DB (c)2002 The Gale Group. All rts. reserv.

SUPPLIER NUMBER: 12793759 (THIS IS THE FULL TEXT) FCC puts satellite DAB plan up for comment. (Federal Communications Commission, Digital Audio Broadcasting) (Brief Article)

Lambert, Peter Broadcasting, v122, n43, p28(1)

Oct 19, 1992

DOCUMENT TYPE: Brief Article ISSN: 0007-2028 LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT

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TEXT:

The future for satellite-delivered digital audio broadcasting in the United States got more specific last week, as the FCC accepted for filing Satellite CD Radio Inc.'s application to deliver CD-quality audio services to credit card-sized, automobile-mounted satellite receivers by 1996.

The National Association of Broadcasters said it will file a petition to deny Satellite CD Radio's application.

On Oct. 13, just one week after the commission proposed allocating 50 mhz of spectrum to satellite DAB (Broadcasting, Oct. 12), it released the specific application for industry comments by Nov. 13, replies by Dec. 1and responses by Dec. 15.

"It is premature to accept an individual company's application before you have a comprehensive policy on DAB in place," said NAB spokeswoman Lynn McReynolds. "To put satellite DAB ahead of terrestrial DAB - give satellite a jump - creates a serious threat to localism."

In addition to planning the launch of two birds to deliver 30 channels of nonstop, commercial-free subscription and "pay-per-listen" music formats from two orbital slots, "on a non-common carrier, non-broadcasting basis," Satellite CD Radio also plans to implement an as yet unspecified number of terrestrial repeaters five years after the service is launched in 1996.

"For a subscription fee of about \$5-\$10 per month," the company says it will deliver "swing, children's entertainment and folk rock formats ... rarely available in local radio markets. "

At the same time, the FCC set a Dec. 15 deadline for other "concrete, comprehensive" proposals to operate similar systems via eight orbital positions in the S-band (2310-2360 \mbox{mhz}).

RBDS HOME STRETCH

The proposed Radio Broadcast Data System (RBDS) standard gained "overwhelming approval" on an initial ballot among National Radio Systems Committee (NRSC) members last Tuesday (Oct. 13), meaning a new generation of car and other AM-FM receivers with data displays could be in the consumer market by mid- 1993. Made up of National Association of Broadcasters and Electronic Industries Association members, NRSC estimates a January release of the standard, which has been two years in the making.

RBDS will allow radios to receive text transmissions (such as station identifications and program information) and emergency alerts (overriding CD or cassette operation). RBDS also will allow consumers to scan the radio dial in search of a particular format, and it will support Emergency Broadcast System and paging technologies.

"We're pleased that NAB and EIA have cooperated to lead development of this new standard," said NAB Executive Vice President John Abel. "The application of RBDS to both the AM and FM bands has assured that all radio stations may participate."

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FCC TO LAUNCH CABLE ENCRYPTION INQUIRY

Titan Satellite Systems Corp. expects cable TV programers and satellite equipment manufacturers and distributors will provide the FCC with "significant information regarding current market conditions and practices that have blocked competition" in the satellite descrambler market, says Titan Vice President Michael Meltzer - former executive for General Instrument, supplier of the industry's only descrambler, VideoCipher.

Within two weeks, the FCC is expected to issue a notice of inquiry into encryption technology for cable programing, with emphasis on the fact that General Instrument remains the only supplier of decoders.

The inquiry will focus on whether VideoCipher competitors ought to be given access to GI's DBS authorization center. Titan co-owns VideoCipher-compatible patents and plans to sell its Linkabit descrambler for \$250, compared with GI's \$336. Meltzer says Titan, which now enters its fourth week of negotiations with cable satellite programers, will test its own authorization center by December and go to market by February or March, with or without intervention from regulators.

Whether the FCC has the jurisdiction to take action - such as mandating access to GI's authorization center - will in fact be part of the inquiry. Jonathan Levy of the FCC's Office of Plans and Policy emphasized the inquiry proposes no rule changes, but said a report on the results will surely be passed on to Representatives Ed Markey (D-Mass.) and Tom McMillen (D-Md.), who requested the NOI be conducted.

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COMPANY NAMES: Satellite CD Radio Inc.--Services
INDUSTRY CODES/NAMES: ARTS Arts and Entertainment
DESCRIPTORS: Digital audio broadcasting--Laws, regulations, etc.;
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03640881 Supplier Number: 47840408 (THIS IS THE FULLTEXT) GRUNDIG: DAB -- Just another gimmick or a real benefit to the (in-car)

M2 Presswire, pN/A

July 17, 1997

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TEXT:

M2 PRESSWIRE-17 July 1997-GRUNDIG: DAB -- Just another gimmick or a real benefit to the (in-car) consumer? (C)1994-97 M2 COMMUNICATIONS LTD

* Brian Newell, General Manager, Grundig Car Audio

As the prospect of Digital Audio Broadcasting moves closer to becoming a reality, the question on everyone's lips is what will it mean to the

There is no doubt that in-car radio has undergone something of \boldsymbol{a} revolution in recent years with the introduction of FM Stereo and more recently RDS - all of which have proved to be of real benefit to the user, but so far as Brian Newell, General Manager, Grundig Car Audio is concerned, this is only the tip of the iceberg.

Grundig Car Audio is currently the world leader in DAB technology and was the first company in the world to mass-produce DAB receivers.

Although DAB 'Is still something of an unknown quantity, Brian Newell firmly believes that it is one of the most exciting developments within radio broadcasting since short-wave radio was introduced 75 years ago.

He commented: "DAB is a whole new concept in broadcasting which allows up to eight radio stations to be broadcast on one frequency with no interference or distortion for the mobile listener and near CD quality sound. This means, for example, that the listener could tune into four BBC football commentaries simultaneously on one frequency should he so wish."

These benefits however, are only short-term benefits, because in the long term the possibilities are endless. For not only does DAB mean better sound quality, a better choice of programme content and flexibility, it offers enormous data capabilities enabling the user to access all types of information such as the latest sports news, weather, stock exchange reports, exchange rates etc.

By March 1998, 60% of the population will have access to DAB through the BBC network. Licences for the independent radio stations will be advertised until February 1998 and they should be in a position to offer a digital service by Autumn 1998.

In the early stages, two types of data will initially be available through the BBC. Firstly, PAD (Programme Associated Data) which provides the listener with details about the programme being listened to such as the name of the programme, the record currently being played, name of DJ etc. and secondly data limited to public sector broadcasting such as sports reports, exchange rates, weather reports etc.

The commercial operators on the other hand will be looking to provide a number of value added services on a broader, more commercial scale not only for the benefit of the consumer, but also their advertisers and the broadcaster.

Although it is still very early days, discussions are already underway with data providers, for example, regarding the provision of stock market information which will prove to be highly attractive to the business user.

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Subscription on a 'pay per listen' basis is also another area which is being evaluated. This would mean, for example, that the listener could pay for a 'live feed' to a concert or other live broadcast, much in the same way as Sky are currently doing with various sporting events. This type of conditional access service is a first for radio and is thought will open up a whole new host of opportunities for both listeners and broadcasters.

Coupon selling too is another area under discussion and is likely to prove highly popular with both advertisers and consumers. This means that if a receiver is equipped with a smart card, listeners can take advantage of special offers available to that particular radio station.

Brian Newell continued: "The opportunities are endless in terms of the information which will become available through the digital network. It really is a very exciting time for all those involved in broadcasting."

To access digital radio, consumers will require a special DAB receiver in addition to their current FM stereo, which has to be digitally compatible. In the case of a number of sets in the Grundig Car Audio range this can be simply the addition of a black box.

Grundig Car Audio will be showing the next generation of receiver hardware at IFA in Berlin where it is expected prices and availability will

Editor's Note: Brian Newell is an acknowledged expert in the DAB arena. Grundig is a member of the DAB Forum which has recently been reformed as a commercial body having previously been run by the DTI.

Within the DAB Forum Brian Newell sits on:

The Consumer Equipment Working Group

The Publicity and Promotions Working Group

Member of the Constitution Working Group (now disbanded)

Member of Classic FM DAB Consortium

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